AMENDMENTS TO THE CLAIMS

Please cancel Claims 47-49 without prejudice, as indicated below.

Please amend Claims 1, 26, 30, 37, 39, 44, 50, and 51 as indicated below.

A complete listing of all claims is presented below with insertions underlined (e.g., insertion), and deletions struckthrough or in double brackets (e.g., ~~deletion~~ or [[deletion]]):

1. (Currently Amended) A therapy apparatus for treating a patient's brain, the therapy apparatus comprising:

a light source having an output emission area positioned to irradiate a portion of the brain with an efficacious power density and wavelength of light, wherein the efficacious power density is between about 0.01 mW/cm^2 and about 100 mW/cm^2 at a depth of approximately 2 centimeters below the patient's dura; and

an element adapted to be interposed between the light source and the patient's scalp, the element adapted to inhibit temperature increases at the scalp caused by the light, wherein the element is adapted to apply pressure to at least a portion of the scalp, thereby blanching the portion of the scalp and decreasing absorption of the light by blood in the scalp.

2. (Original) The therapy apparatus of Claim 1, wherein the light passes through the element prior to reaching the scalp.

3. (Original) The therapy apparatus of Claim 1, wherein the element is adapted to contact the patient's scalp.

4. (Original) The therapy apparatus of Claim 3, wherein the element is attached to the light source and is adapted to conform to the scalp so as to position the light source relative to the scalp.

5. (Original) The therapy apparatus of Claim 4, wherein the element is mechanically adjustable so as to adjust a position of the light source relative to the scalp.

6. (Original) The therapy apparatus of Claim 4, wherein the element is mechanically adjustable so as to fit the therapy apparatus to the scalp.

7. (Original) The therapy apparatus of Claim 6, wherein the element comprises a bag containing a material adapted to conform to contours of the scalp.

8. (Original) The therapy apparatus of Claim 4, wherein at least a portion of the element is within an optical path of the light from the source to the scalp.

9. (Original) The therapy apparatus of Claim 8, wherein the element is substantially optically transmissive at the wavelength and is adapted to reduce back reflections of the light.

10. (Original) The therapy apparatus of Claim 9, wherein the element is adapted to fit to the scalp so as to substantially reduce air gaps between the scalp and the element in the optical path of the light.

11. (Original) The therapy apparatus of Claim 9, wherein the element comprises a material having a refractive index which substantially matches a refractive index of the scalp.

12. (Original) The therapy apparatus of Claim 11, wherein the material comprises glycerol.

13. (Original) The therapy apparatus of Claim 11, wherein the material comprises silica gel.

14. (Original) The therapy apparatus of Claim 1, wherein the element is adapted to cool the scalp by removing heat from the scalp.

15. (Original) The therapy apparatus of Claim 14, wherein the element comprises a conduit adapted to contain a coolant which flows through the conduit near the scalp, is heated by the scalp, and which flows away from the scalp.

16. (Original) The therapy apparatus of Claim 15, wherein the coolant circulates between the element and a heat transfer device, whereby the coolant is heated by the scalp and cooled by the heat transfer device.

17. (Original) The therapy apparatus of Claim 15, wherein the coolant comprises water.

18. (Original) The therapy apparatus of Claim 15, wherein the coolant comprises air.

19. (Original) The therapy apparatus of Claim 14, wherein the element comprises a non-flowing material which is thermally coupled to the scalp.

20. (Original) The therapy apparatus of Claim 19, wherein the non-flowing material is pre-cooled prior to treatment of the brain.

21. (Original) The therapy apparatus of Claim 19, wherein the non-flowing material comprises a gel.

22. (Cancelled)

23. (Original) The therapy apparatus of Claim 1, wherein the element is adapted to diffuse the light prior to reaching the scalp.

24. (Original) The therapy apparatus of Claim 1, wherein the irradiated portion of the brain comprises the entire brain.

25. (Original) The therapy apparatus of Claim 1, wherein the apparatus is wearable over multiple concurrent days.

26. (Currently Amended) A therapy apparatus for treating brain tissue, the therapy apparatus comprising:

a light source positioned to irradiate at least a portion of a patient's head with light having a wavelength and power density which penetrates the cranium to deliver an efficacious amount of light to brain tissue, wherein the light has a power density of between about 0.01 mW/cm^2 and about 100 mW/cm^2 at a depth of approximately 2 centimeters below the patient's dura; and

a material which inhibits temperature increases of the head, the material adapted to contact the head and to apply pressure to at least the irradiated portion of the patient's head, thereby blanching the irradiated portion.

27. (Cancelled)

28. (Original) The therapy apparatus of Claim 26, wherein the light source is adapted to irradiate a predetermined area of the head.

29. (Original) The therapy apparatus of Claim 28, wherein the predetermined area of the head is a substantial fraction of the total area of the head.

30. (Currently Amended) A therapy apparatus for treating a patient's brain, the therapy apparatus comprising:

a light source adapted to irradiate at least a portion of the brain with an efficacious power density and wavelength of light, wherein the efficacious power density is between about 0.01 mW/cm^2 and about 100 mW/cm^2 at a depth of approximately 2 centimeters below the patient's dura; and

an element adapted to inhibit temperature increases at the scalp, wherein the element is adapted to apply pressure to at least a portion of the scalp to blanch the portion of the scalp, wherein at least a portion of the element is in an optical path of the light from the light source to the scalp.

31.-36. (Cancelled)

37. (Currently Amended) A method of treating brain tissue, the method comprising introducing light of an efficacious power density onto brain tissue by directing light through a blanched portion of the scalp of a patient, said directing comprising providing a sufficiently large spot size on said scalp to reduce the power density at the scalp below the damage threshold of scalp tissue, while producing sufficient optical power at said scalp to achieve said efficacious power density at said brain tissue, wherein said efficacious power density is between about 0.01 mW/cm^2 and about 100 mW/cm^2 at a depth of approximately 2 centimeters below the patient's dura.

38. (Original) The method of Claim 37, wherein directing comprises causing the light to diverge to create said spot size.

39. (Currently Amended) A method of treating a patient's brain by irradiating the brain with light transmitted through the patient's scalp, the method comprising covering at least a significant portion of the patient's scalp with a light-emitting blanket, the light-emitting blanket comprising a first side in proximity to the scalp and a second side having a reflective coating to reflect light emitted away from the scalp back towards the scalp, wherein the light has a power density between about 0.01 mW/cm^2 and about 100 mW/cm^2 at a depth of approximately 2 centimeters below the patient's dura.

40. (Original) The method of Claim 39, wherein the blanket comprises woven optical fibers.

41. (Original) The method of Claim 39, wherein the blanket comprises an electroluminescent sheet.

42. (Cancelled)

43. (Cancelled)

44. (Currently Amended) A method for treating a patient's brain, the method comprising introducing light of an efficacious power density onto a target area of the brain at a depth of at least approximately 2 centimeters below the patient's dura by directing light through a blanched portion of the scalp of the patient, wherein the light has a plurality of wavelengths, and the efficacious power density is between about~~at least~~ 0.01 mW/cm^2 and about 100 mW/cm^2 at the target area.

45. (Original) The method of Claim 44, wherein the light has a first wavelength and a second wavelength, and introducing light comprises directing the first wavelength of light and the second wavelength of light concurrently through the scalp.

46. (Original) The method of Claim 44, wherein the light has a first wavelength and a second wavelength, and introducing light comprises directing the first wavelength of light and the second wavelength of light sequentially through the scalp.

47.-49. (Cancelled)

50. (Currently Amended) A method for treating a patient's brain, the method comprising directing an efficacious power density of light through a blanched portion of the scalp of the patient to a target area of the brain concurrently with applying an efficacious amount of ultrasonic energy to the brain, wherein the efficacious power density is between about 0.01 mW/cm^2 and about 100 mW/cm^2 and the target area is at a depth of at least approximately 2 centimeters below the patient's dura.

51. (Currently Amended) A method of providing a neuroprotective effect in a patient having an ischemic event in the brain, the method comprising:

identifying a patient who has experienced an ischemic event in the brain;

estimating the time of the ischemic event; and

after estimating the time of the ischemic event, waiting to commence administration of a neuroprotective effective amount of light energy to the brain such that the administration of light does not commence until after about two hours following the estimated time of the ischemic event, wherein the light energy has a power density between about 0.01 mW/cm^2 and about 100 mW/cm^2 at a depth of approximately 2 centimeters below the patient's dura.

52. (Previously Presented) The method of Claim 51, wherein administration of a neuroprotective effective amount of light energy to the brain does not commence until about three hours following the estimated time of the ischemic event.

53. (Previously Presented) The method of Claim 51, wherein administration of a neuroprotective effective amount of light energy to the brain does not commence until about five hours following the estimated time of the ischemic event.

54. (Original) The method of Claim 51, wherein the light energy has a power density of at least about 0.1 mW/cm^2 at a depth of approximately 2 centimeters below the dura.

55. (Original) The method of Claim 51, wherein the light energy has a power density of at least about 10 mW/cm^2 at a depth of approximately 2 centimeters below the dura.

56. (Original) The method of Claim 51, wherein the light energy has a power density of at least about 20 mW/cm^2 at a depth of approximately 2 centimeters below the dura.

57. (Original) The method of Claim 51, wherein the light energy has a wavelength between about 630 nanometers to about 1064 nanometers.

58. (Original) The method of Claim 51, wherein the light energy has a wavelength between about 780 nanometers and about 840 nanometers.

59. (Original) The method of Claim 51, wherein the light energy has a power density between about 10 mW/cm^2 and about 10 W/cm^2 at the surface of the scalp.

60. (Original) The method of Claim 51, further comprising delivering the light energy for at least one treatment period of at least about ten minutes.

61. (Original) The method of Claim 51, further comprising delivering the light energy for at least one treatment period for at least about five minutes.

62. (Original) The method of Claim 61, wherein the light energy is pulsed during the treatment period.

63. (Original) The method of Claim 61, wherein the light energy is continuous during the treatment period.

64. (Original) The method of Claim 61, wherein the light energy is delivered for a first treatment period and a second treatment period commenced subsequent to the completion of the first treatment period.

65. (Original) The method of Claim 64, wherein commencement of the second treatment period occurs at least about five minutes after completion of the first treatment period.

66. (Original) The method of Claim 64, wherein commencement of the second treatment period occurs at least one week after completion of the first treatment period.